

REMARKS/ARGUMENTS

Claims 1-7, 9-30, and 32-36 were previously pending in the application. Claim 35-36 are canceled; and claims 1, 12, 14, 16, 20, and 29-30 are amended herein. Assuming the entry of this amendment, claims 1-7, 9-30, and 32-34 are now pending in the application. The Applicant hereby requests further examination and reconsideration of the application in view of the foregoing amendments and these remarks.

Rejections under 35 U.S.C. 112, Second Paragraph

On page 2, the Examiner rejected claims 1-7, 9-30, and 32-34 under 35 U.S.C. 112, second paragraph, as being indefinite.

Claims 1 and 20

Regarding claims 1 and 20, the Examiner stated that "it is not understood how the 'transconductor capacitor' can generate a second control signal since it is not connected to anything and how this capacitor is read on the preferred embodiment or seen on the drawings. The same is true for claim 20."

In response, the Applicant has amended claim 1 to recite that the loop filter comprises transconductor circuitry connected to the first node and that the transconductor capacitor is connected to the transconductor circuitry and the oscillator to generate a second control signal for the oscillator. Claims 12, 14, and 16 have been amended to conform to currently amended claim 1. In addition, the Applicant has amended claim 20 to recite that the digital gm path is connected between the first node and the transconductor capacitor.

Capacitor C3 in Fig. 6 is an example of the transconductor capacitor of claim 1, where comparator 602, accumulator 604, and converter 606 form an example of the transconductor circuitry of claim 1 and of the digital gm path of claim 20.

Claim 20

Regarding claim 20, the Examiner further stated that "it is not clear how the path can accumulate the differences, where the differences comes from and how the path an generate signal since it is only a transmission line."

The digital gm path of claim 20 is not "only a transmission line." Those skilled in the art will understand that, in the context of electrical circuitry, the term "path" is not limited to "only a transmission line." The term "path" can also refer to a set of one or more circuit elements that receives an input signal and generates an output signal based on signal processing implemented by those circuit elements. Comparator 602, accumulator 604, and converter 606 of Fig. 6 form an example of the digital gm path of claim 20, where the differences are generated by the comparator and accumulated by the comparator, and the converter generates the first gm output signal based on the accumulated differences from the accumulator.

Claim 29

Regarding claim 29, the Examiner stated that "it is unclear what the 'first node' on line 9 is where it comes from, how the path can accumulate differences, where the differences come from and how the path can generate a signal since it is only a transmission line."

In response, the Applicant has amended claim 29 to recite that the loop filter comprises a resistor connected, on a first side, to the charge pump and the oscillator and, on a second side, to the first node, where the digital gm path is connected between the first node and the transconductor capacitor. Claim 30 has been amended to conform to currently amended claim 29.

As with claim 20, the Applicant submits that the digital gm path of claim 29 is not "only a transmission line." Those skilled in the art will understand that, in the context of electrical circuitry, the term "path" is not limited to "only a transmission line." The term "path" can also refer to a set of one or more circuit elements that receives an input signal and generates an output signal based on signal processing implemented by those circuit elements. As described in the specification, comparator 602, accumulator 604, and converter 606 of Fig. 6 form an example of the digital gm path of claim 29, where the differences are generated by the comparator and accumulated by the comparator, and the converter generates the first gm output signal based on the accumulated differences from the accumulator.

None of these amendments have been made to overcome any prior-art rejections.

In view of the foregoing, the Applicant submits therefore that the rejections of claims under Section 112, second paragraph, have been overcome.

On page 3, the Examiner stated that claims 1-7, 9-30, and 32-34 would be allowable if rewritten or amended to overcome the rejections under Section 112, second paragraph. Since the claims have been amended to overcome the rejections under Section 112, second paragraph, the Applicant submits that all of the now-pending claims are allowable.

In view of the above amendments and remarks, the Applicant believes that the now-pending claims are in condition for allowance. Therefore, the Applicant believes that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

Respectfully submitted,

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